

AUGUST 2019



**WIM #31
US 2, MP 8.0
EAST GRAND
FORKS, MN**

**MONTHLY
REPORT**



Your Destination...Our Priority



WIM Site Location

WIM #31 is located on US 2 near East Grand Forks in Polk county.

System Operation

WIM #31 was operational for the entire month of August 2019. Volume was computed using all monthly data.

System Calibration

WIM #31 was most recently calibrated on 2016-11-01. Table 1 summarizes the front axle weights of class 9s by lane ¹. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation ². Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

Summary of Volume Statistics

Total Monthly Volume: 185484 | Passenger Vehicles: 168743 | Heavy Commercial Vehicles: 16741

Monthly Average Daily Traffic (MADT): 5952 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 540

See Table 2 for vehicle class breakdown

Passenger Vehicles (PVs) and Heavy Commercial Vehicles (HCVs)

Volume trends. EB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays. WB vehicles typically reached highest volume levels on Sundays, with lowest volumes reported on Saturdays (see Figure 3 and 4).

Passenger Vehicles (PVs)

Volume trends. On an average 24-hour day (see Figure 5), EB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, WB PVs peaked in volume between 03 PM and 05 PM

Heavy Commercial Vehicles (HCVs)

Volume trends. On an average 24-hour day, HCVs traveling EB typically reached peak volume levels between 03 PM and 05 PM, while volume going WB peaked between 03 PM and 05 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

Overweight HCVs

Volume trends. Of a total of 16741 HCVs, 1538 of them were overweight ³. These overweight HCVs contributed to 0.8% of total monthly volume, and 9.3% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Thursdays, with lowest volumes reported on Sundays. WB overweight vehicles tended to reach highest volumes on Fridays, with lowest volumes reported on Sundays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 10 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 63.1% of all overweight vehicles traveling WB this month (see Figure 7 & 8). Figure 9 shows the number of vehicles exceeding 88,000 pounds that crossed the WIM over the last 12 months. The highest number of 88,000+ vehicles within the last 12 months occurred in June.

WIMs are currently used as a screening tool for weight enforcement, and it is estimated that the WIM scales can measure gross vehicle weights (GVW) within 90-95% of static weight scale measurements. Due to the possibility of measurement error, vehicles exceeding 10% of their legal weight limits (or 1.1 times their legal weight limits) are considered overweight in this report ⁴.

Using normal load limits ,59 EB vehicles exceeded 88,000 pounds (42 vehicles were Class 13's; 12 vehicles were Class 10's). Of vehicles traveling WB,

226 EB vehicles exceeded 88,000 pounds (178 vehicles were Class 13's; 47 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from August 2019.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in August 2019. Data suggests that there were greater numbers of fully_loaded Class 9's than empty Class 9's traveling EB, while there were more fully_loaded Class 9's than empty traveling WB. Data also suggests that there were more empty Class 10's than fully_loaded traveling in the EB direction. In the WB direction, there were more fully_loaded class 10 vehicles.

Freight Totals. A total of 124719 tons of freight was recorded to have crossed the WIM. More freight was shipped WB (56.1%) than EB (43.9%). See Table 4 and Figure 11 for more freight information.

#####Infrastructure Considerations Bridge. Bridge No. 8023 (a box culvert) is approximately 14.6 miles east of WIM #31, and Bridge No. 4700 is 6.4 miles west of WIM #31. WIM #31 recorded a total of 185484 vehicles with a combined GVW of 1451293 kips (1 kip = 1,000 pounds = 0.5 tons) in August 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 9898 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 50.6% of all ESALs were recorded WB while 49.4% was observed EB. In particular, 47% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 20% of total GVW observed this month). See Table 6 and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

#####WIM monthly reports can be found at:

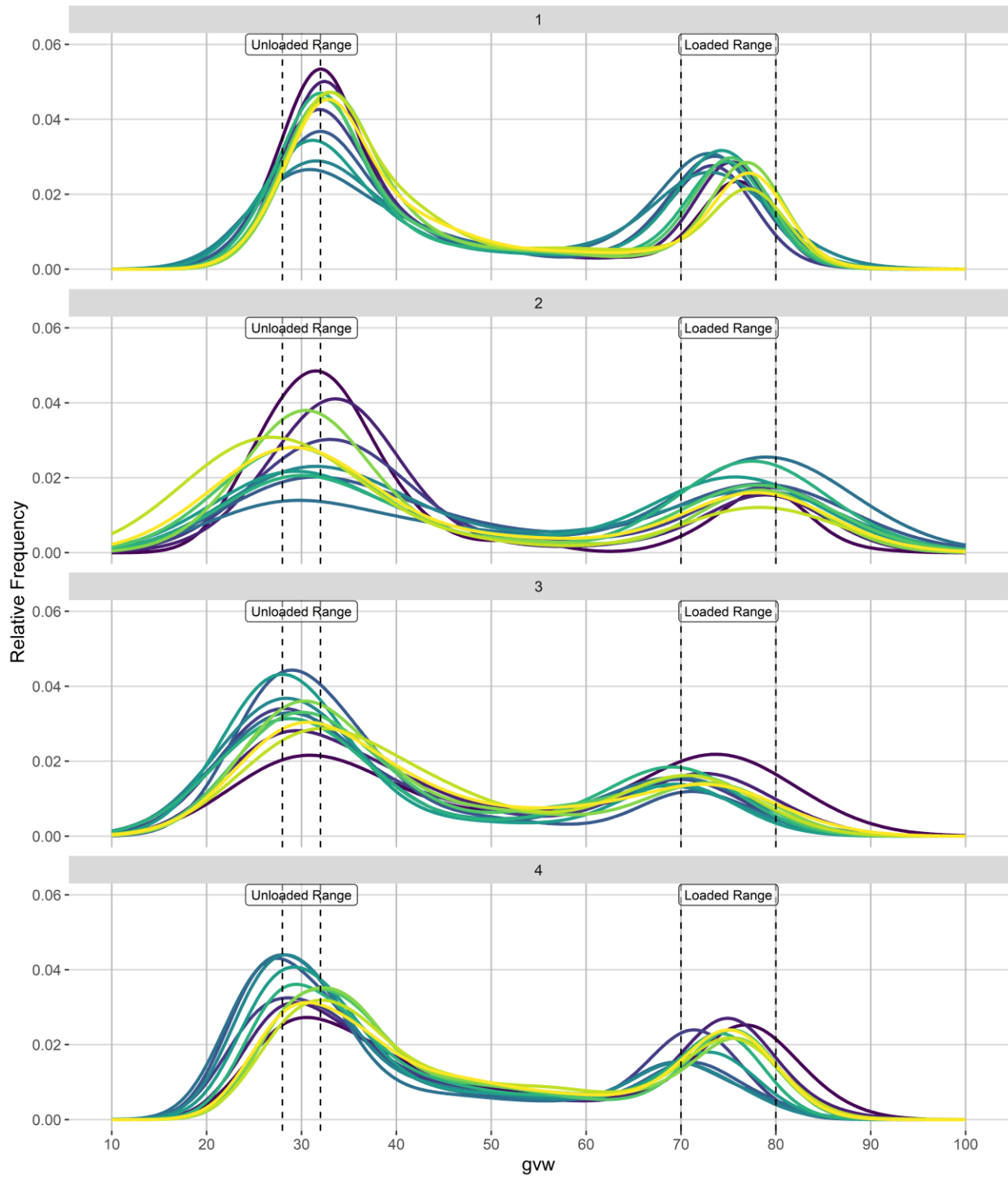
<http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html> MnDOT's vehicle

classification scheme and vehicle class groupings for traffic forecasting can be found at:
<http://www.dot.state.mn.us/traffic/data/data-products.html#weight>

- ¹ Front axle weights of Class 9s are monitored on a monthly basis to assure performance between calibrations. The current goal of the WIM scale calibration is to have each individual axle weight stay within a range of ±9% of baseline calibration values
- ² Previous WIM research indicates that unloaded Class 9s typically weigh 28-32 kips, while loaded Class 9s generally fall in the 70-80 kip range. More recent data from several WIM sites suggests that the unloaded Class 9 range may have moved a little higher over time (due to increased presence of sleeper cabs, etc.), although these ranges are also thought to be site-specific.
- ³ An HCV is considered overweight during normal load limits in this report if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 80,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 20,000 pounds; tandem axles spaced 8' or less = 34,000 pounds; tridem axles spaced 9' or less = 43,000 pounds; quad axles spaced 13' or less = 51,000 pounds). Monthly reports use this standard regardless of the time of year however, the Winter Load Increase (WLI) allows a 10% across the board increase in axle and gross vehicle weights without a permit on US, state routes, and county roads. An HCV is considered overweight during Winter Load Increase(WLI) if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 88,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 22,000 pounds; tandem axles spaced 8' or less = 37,400 pounds; tridem axles spaced 9' or less = 47,300 pounds; quad axles spaced 13' or less = 56,100 pounds). An overweight HCV is only included once in the overweight volume calculations regardless of how many of the aforementioned conditions are violated. For information on MN weight limit dates and statutes:
http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp
- ⁴ For example, Class 9s and 10s can legally have gross vehicle weights up to 80,000 lbs (with the exception of permitted loads) during normal load limits. To account for measurement error on the WIM scales, those exceeding 10% of the legal GVW maximum (or 1.1 times the legal GVW) should be screened (e.g., 80,000 lbs + 8,000 lbs = 88,000 lbs). Similarly during WLI vehicles weighing 96,800 lbs should be screened.

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Figure 1 - Monthly Class 9 GVW Histogram



Time

September 2018	December 2018	March 2019	June 2019
October 2018	January 2019	April 2019	July 2019
November 2018	February 2019	May 2019	August 2019

Months that have not passed QC parameters are not displayed

Figure 2 - Percent Difference of Front Axle Weight from
Last Calibration (+/- 95% CI)

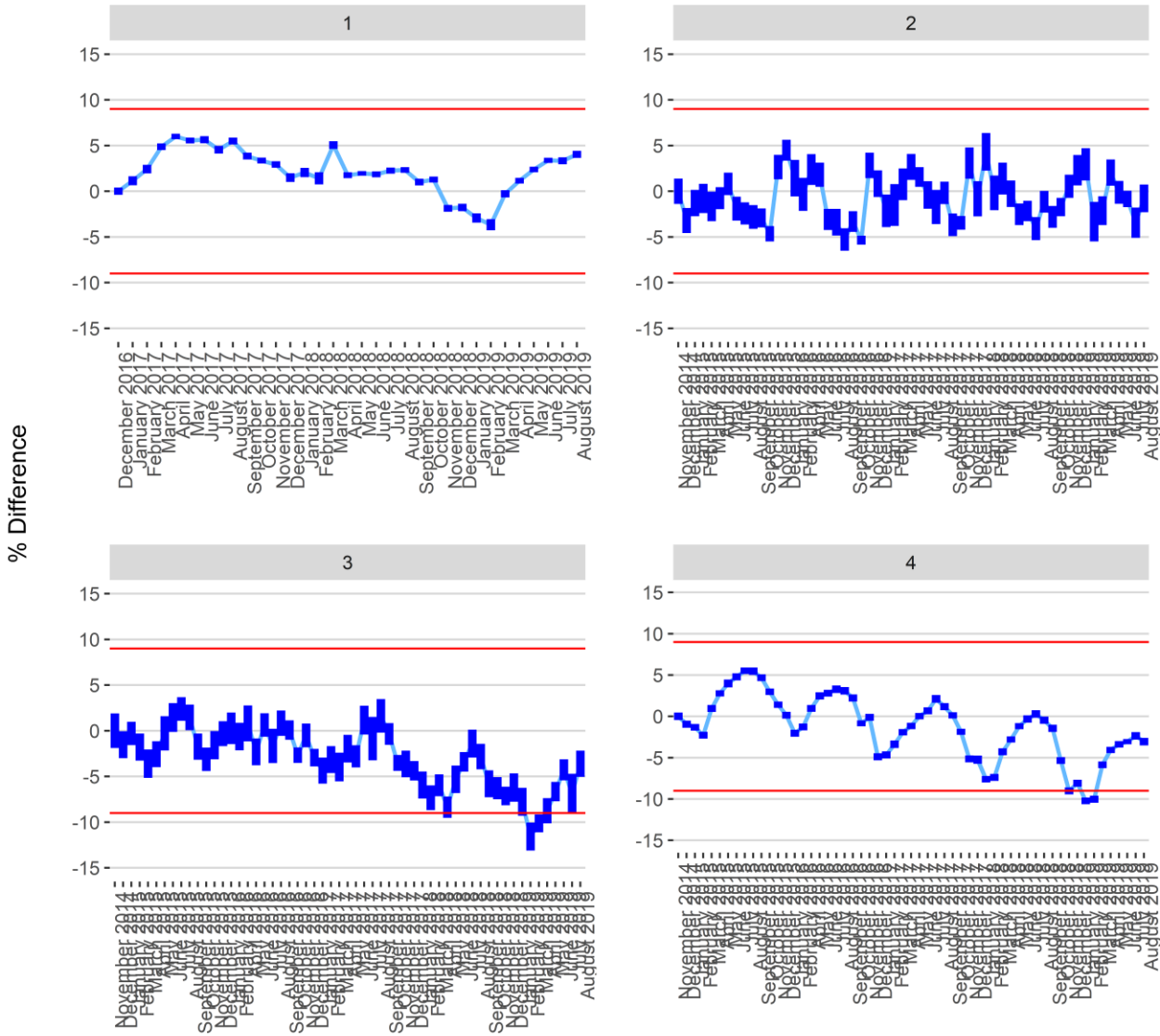


Figure 2 - Average Vehicle Volume
vs. Day of the Week

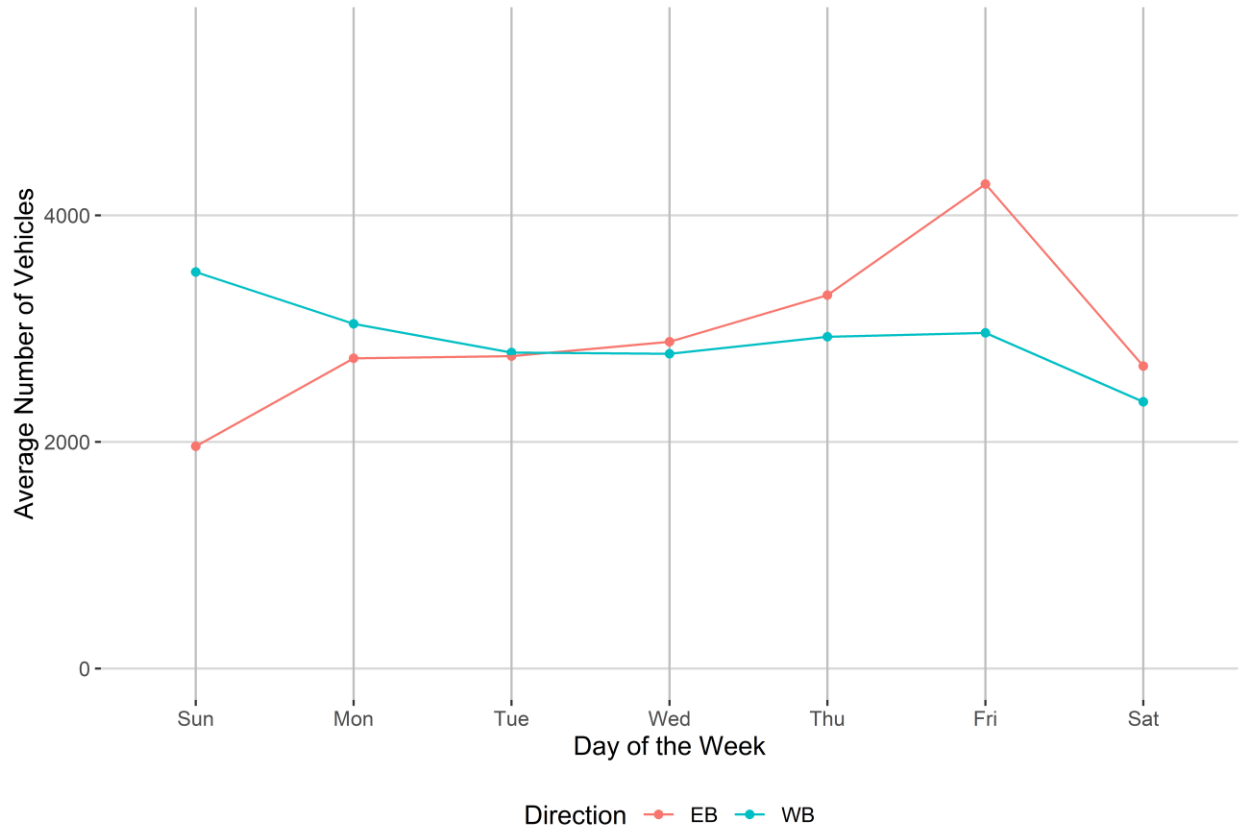


Figure 3 - Average Overweight Vehicle Volume
vs. Day of the Week

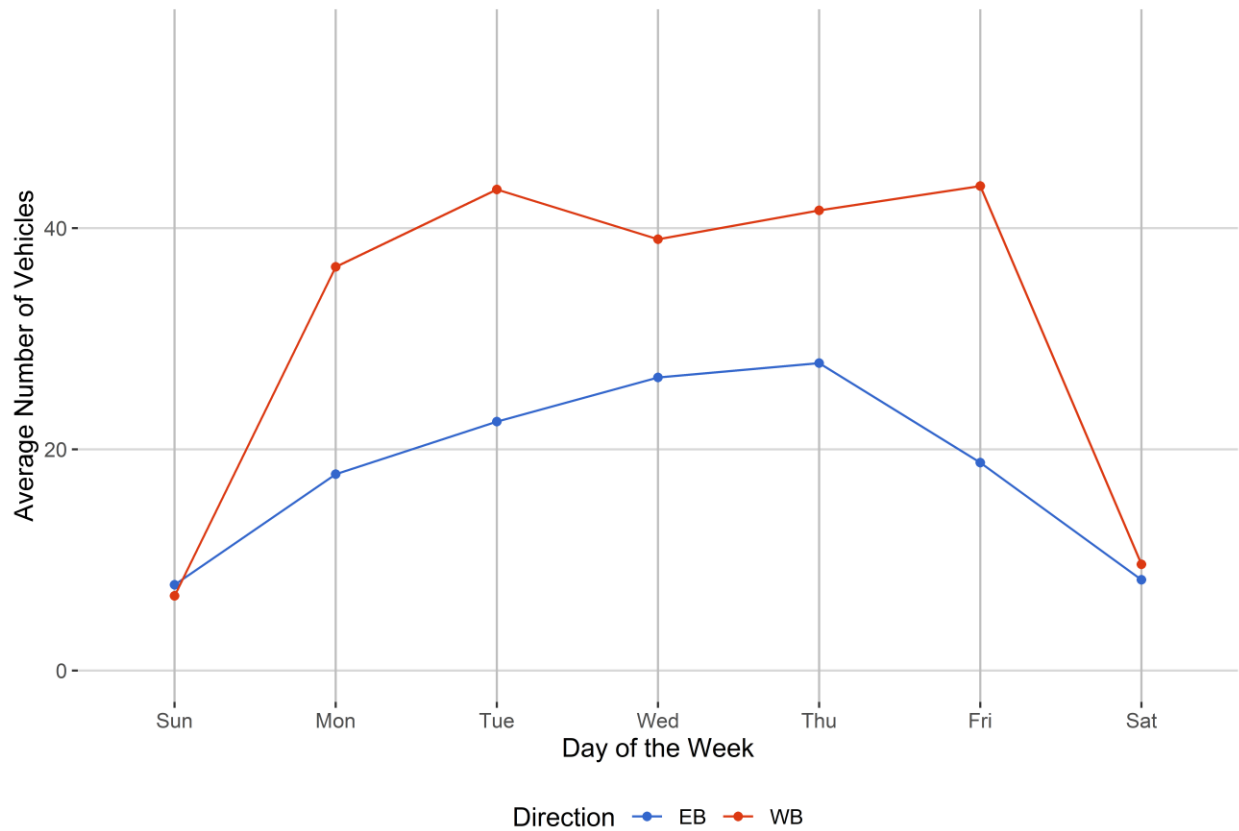


Figure 4 - Passenger Vehicles
vs. Hour of the Day

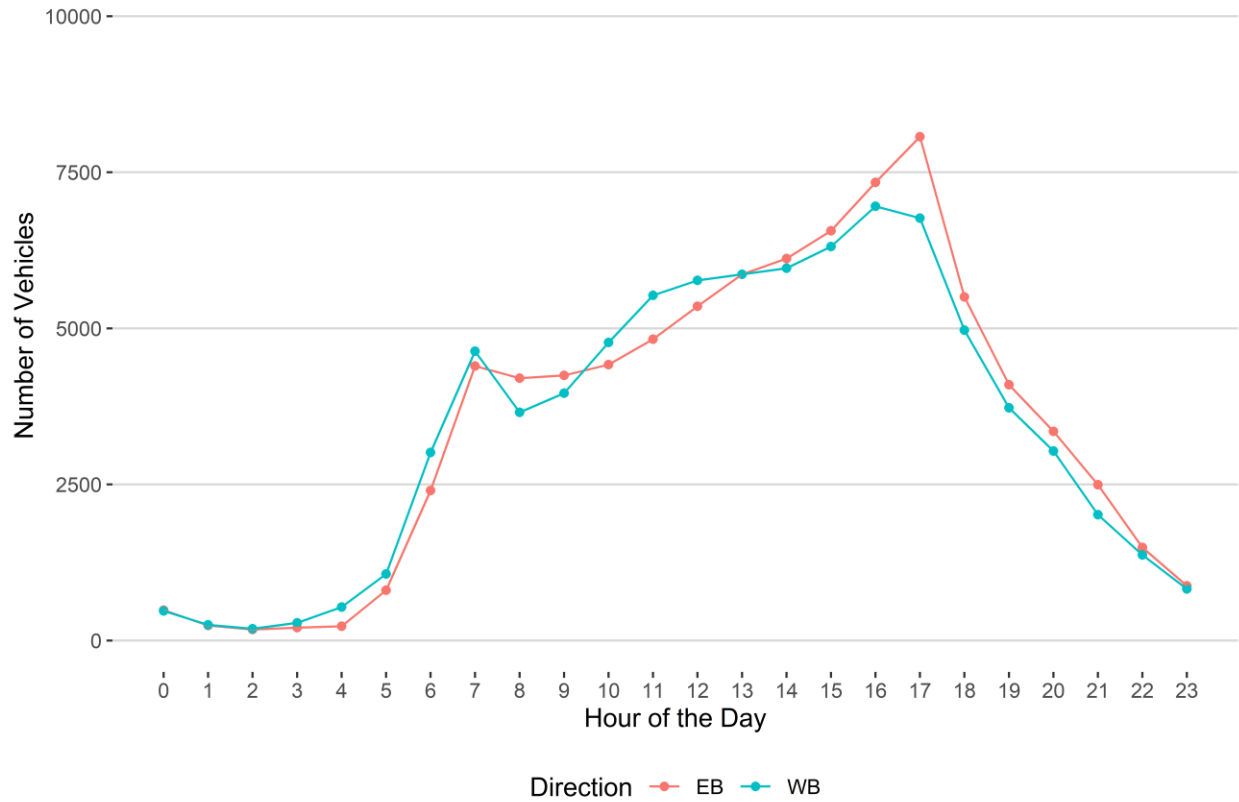


Figure 5 - Heavy Commercial Vehicles
vs. Hour of the Day

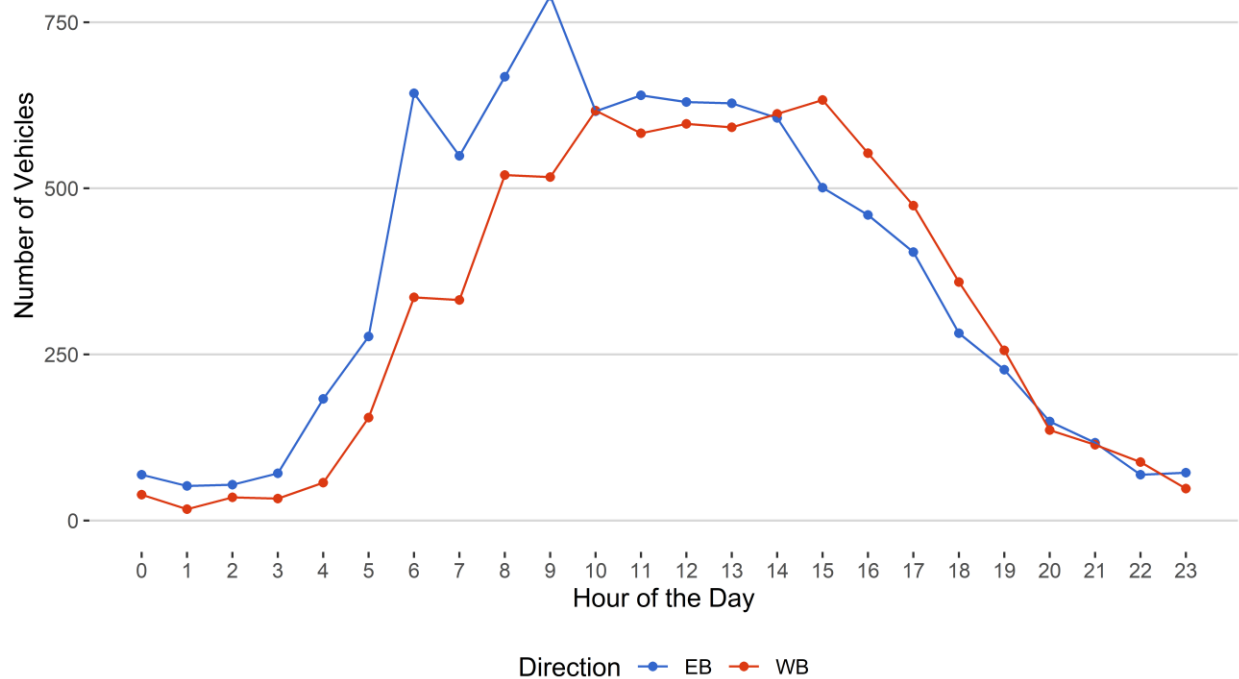


Figure 6 - Overweight Vehicles by Class
vs. Hour of the Day

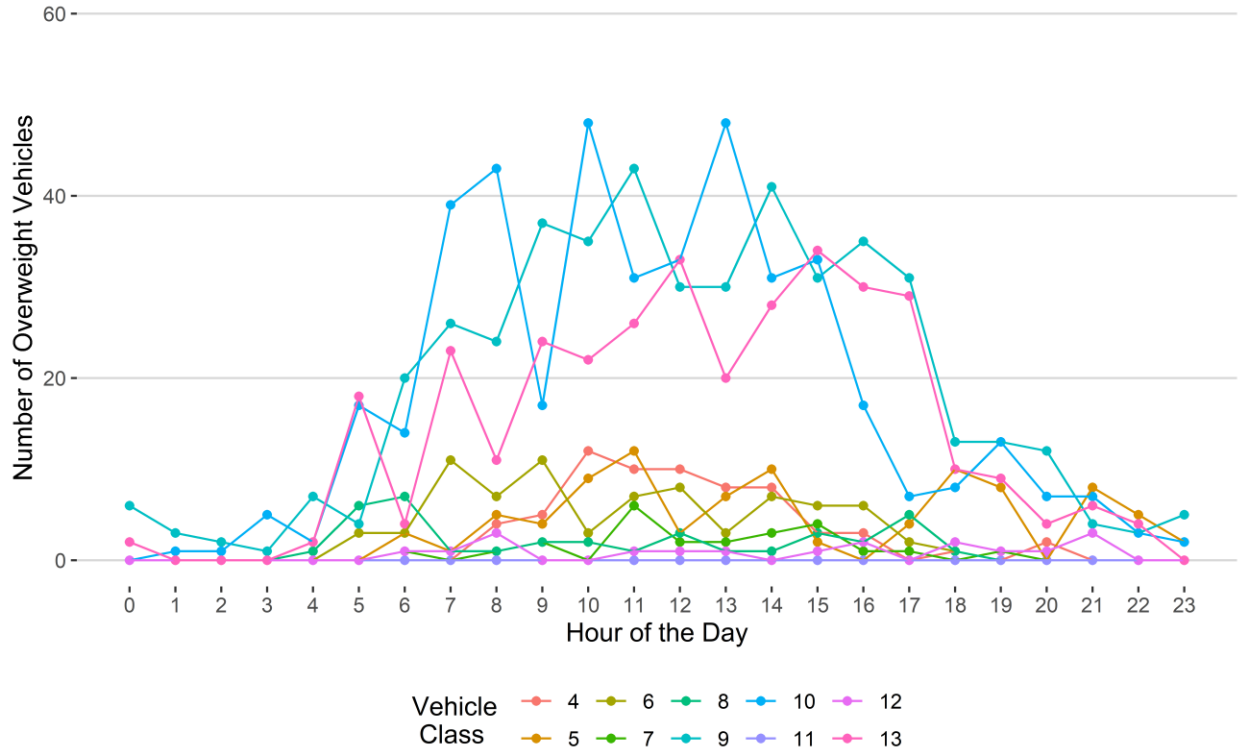


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

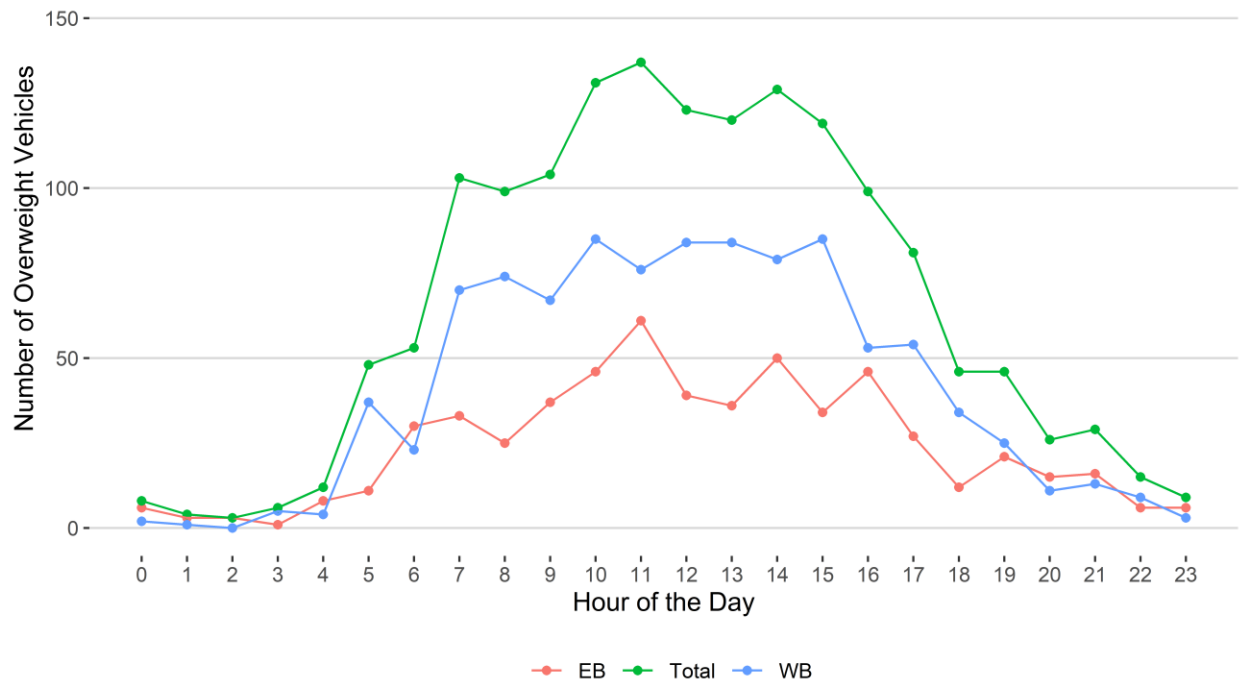
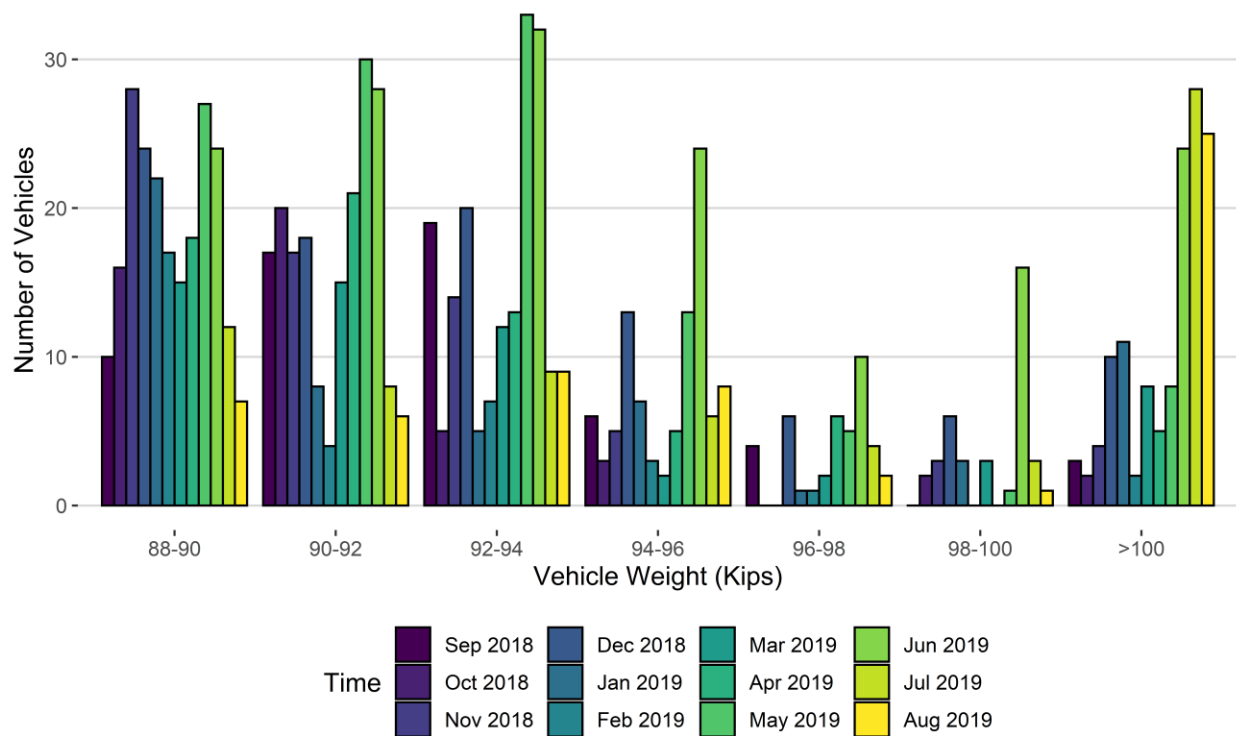
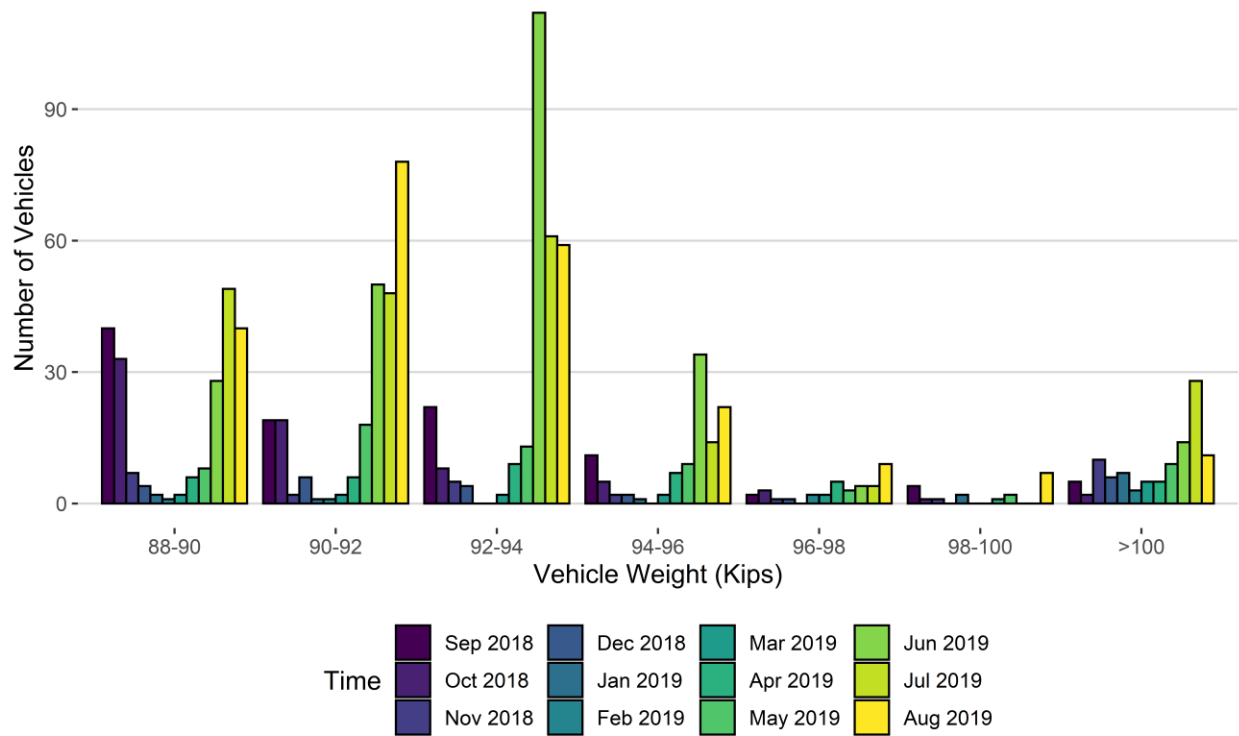


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019
88-90	10	16	28	24	22	17	15	18	27	24	12	7
90-92	17	20	17	18	8	4	15	21	30	28	8	6
92-94	19	5	14	20	5	7	12	13	33	32	9	9
94-96	6	3	5	13	7	3	2	5	13	24	6	8
96-98	4	0	0	6	1	1	2	6	5	10	4	2
98-100	0	2	3	6	3	0	3	0	1	16	3	1
>100	3	2	4	10	11	2	8	5	8	24	28	25
Total	59	48	71	97	57	34	57	68	117	158	70	58

Figure 8 - Histogram of WB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019
88-90	40	33	7	4	2	1	2	6	8	28	49	40
90-92	19	19	2	6	1	1	2	6	18	50	48	78
92-94	22	8	5	4	0	0	2	9	13	112	61	59
94-96	11	5	2	2	1	0	2	7	9	34	14	22
96-98	2	3	1	1	0	2	2	5	3	4	4	9
98-100	4	1	1	0	2	0	0	1	2	0	0	7
>100	5	2	10	6	7	3	5	5	9	14	28	11
Total	103	71	28	23	13	7	15	39	62	242	204	226

Figure 8 - Class 9's and 10's by Direction
vs Gross Vehicle Weight

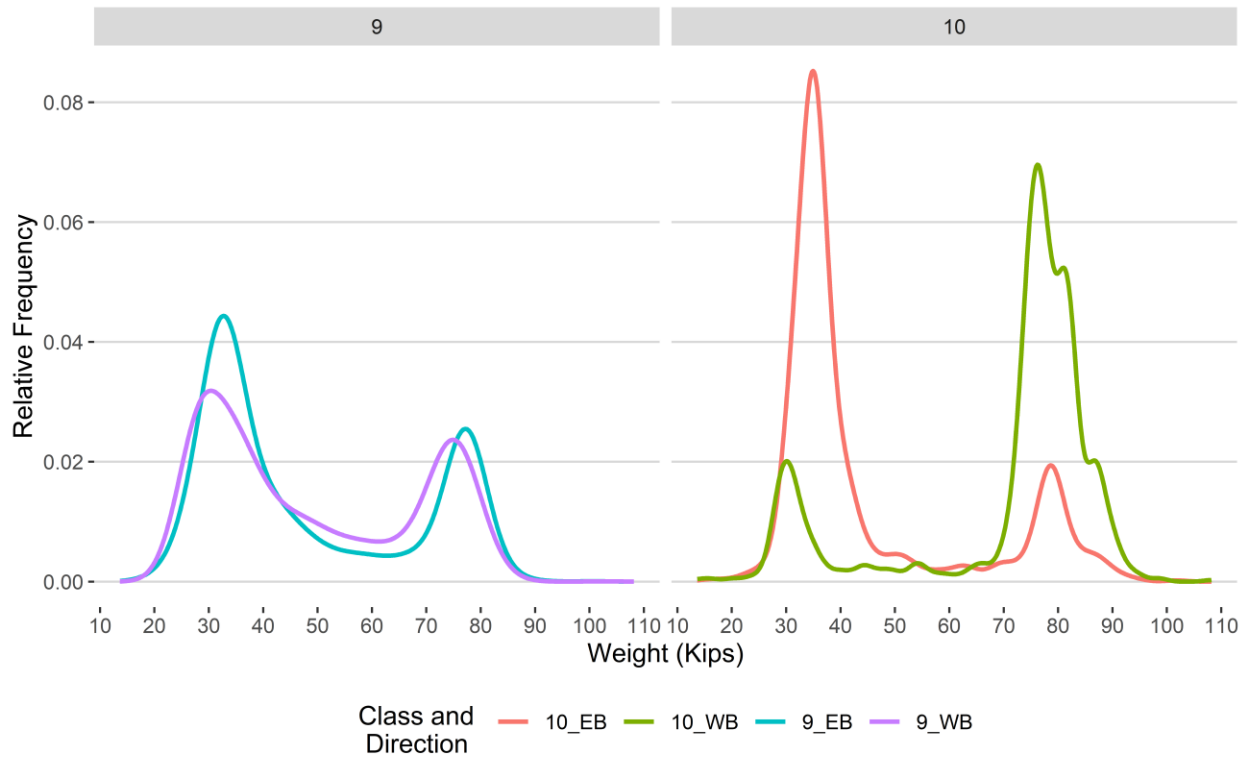


Figure 9 - Freight Percentage
by Direction and Class

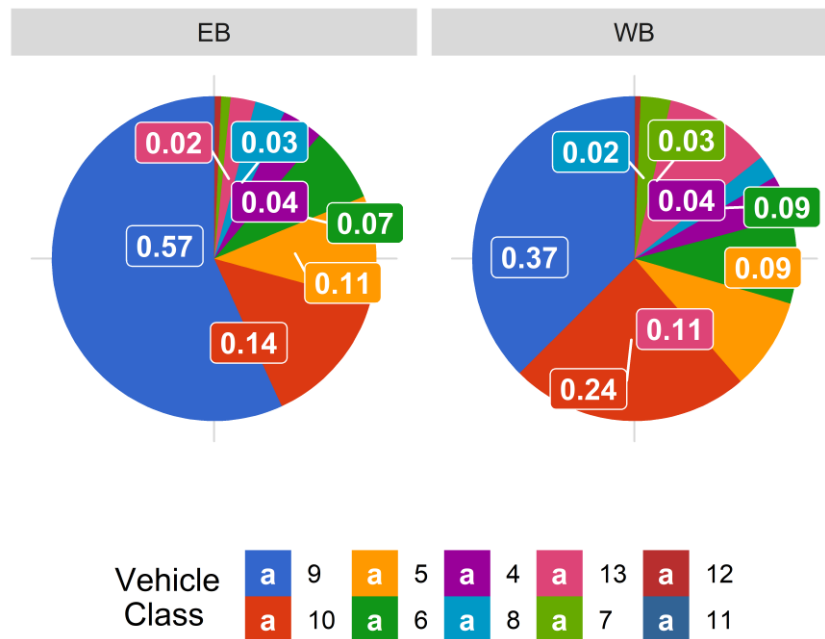


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

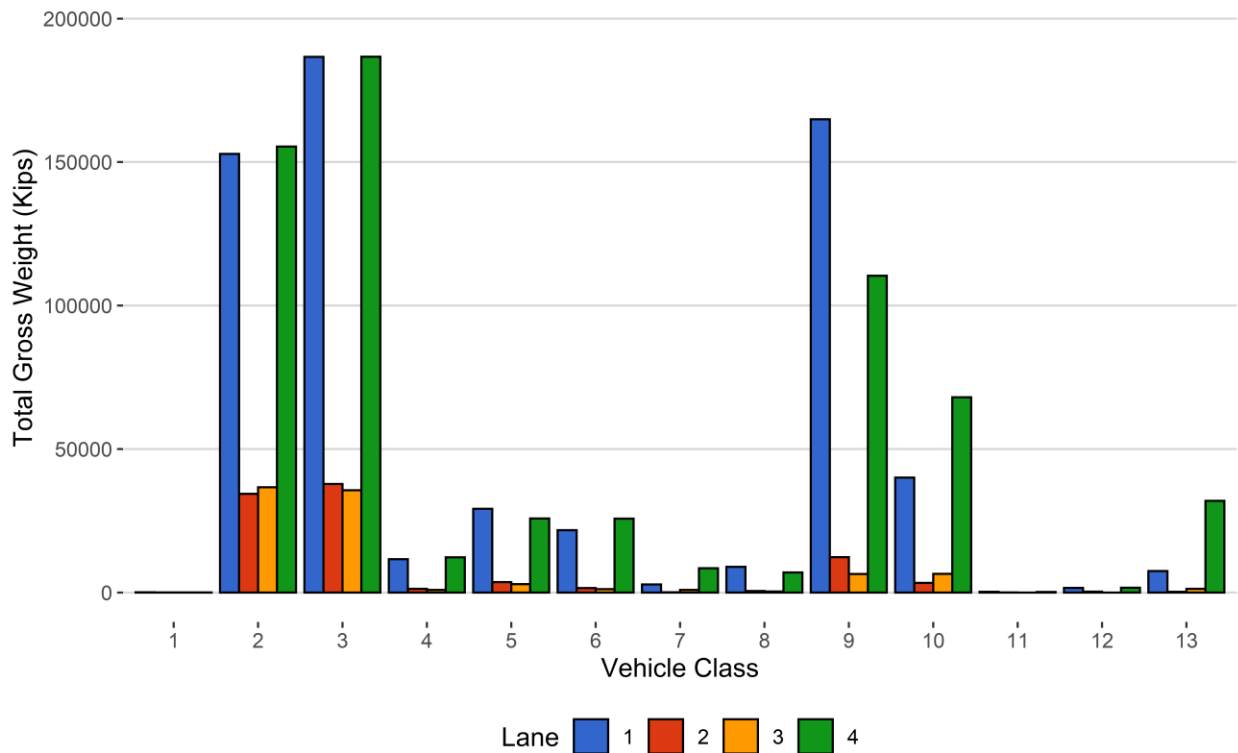


Figure 11 - Total Gross Vehicle Weight t

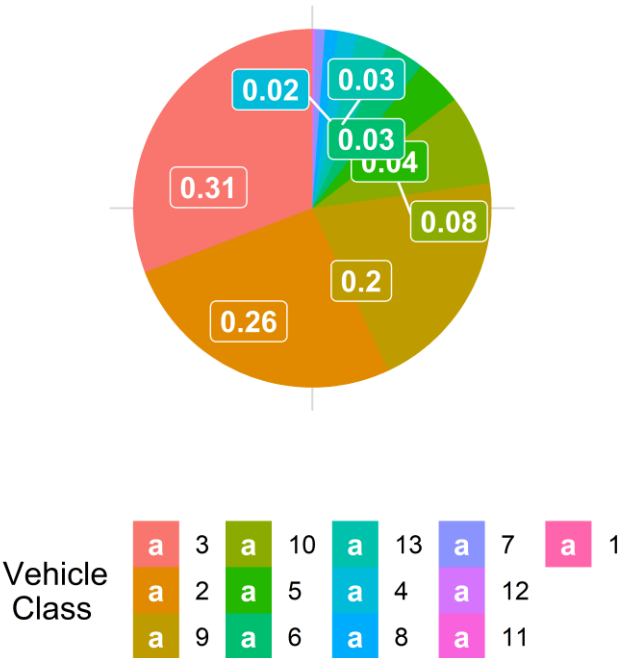


Figure 12 - Total ESALs by Class and Lane

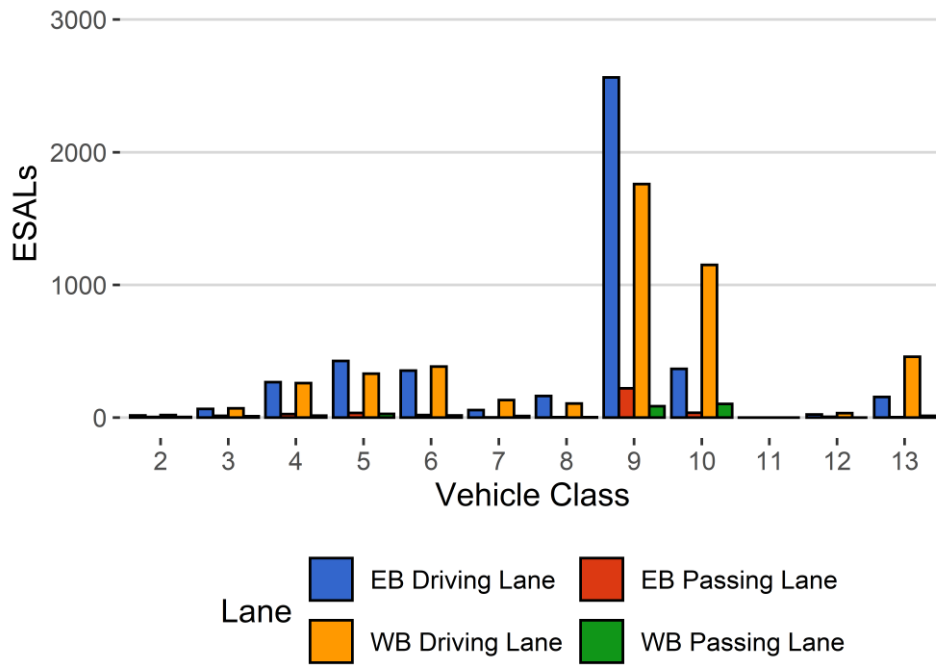


Figure 13 - ESALs by Class

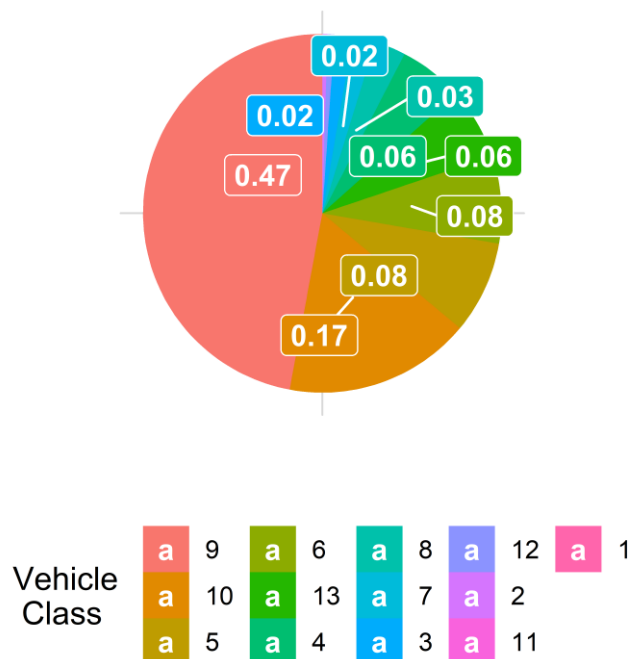


Table 1 Class 9 Front Axle Weight by Lane

<i>Month</i>	<i>Lane 1 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 2 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 3 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 4 (kips)</i>	<i>Front Axle +/- 9%</i>
November 2014	NA	NA	11.17	0.00	10.87	0.00	11.45	0.00
December 2014	NA	NA	10.82	-3.20	10.70	-1.53	11.34	-0.95
January 2015	NA	NA	11.03	-1.29	10.84	-0.29	11.30	-1.33
February 2015	NA	NA	11.09	-0.79	10.68	-1.79	11.19	-2.29
March 2015	NA	NA	10.99	-1.66	10.48	-3.60	11.56	0.95
April 2015	NA	NA	11.09	-0.76	10.59	-2.56	11.77	2.78
May 2015	NA	NA	11.26	0.80	10.84	-0.28	11.91	3.99
June 2015	NA	NA	10.96	-1.90	11.03	1.45	12.00	4.78
July 2015	NA	NA	10.90	-2.43	11.13	2.38	12.08	5.52
August 2015	NA	NA	10.86	-2.82	11.03	1.47	12.08	5.47
September 2015	NA	NA	10.85	-2.92	10.68	-1.74	11.99	4.67
October 2015	NA	NA	10.65	-4.66	10.53	-3.13	11.79	2.97
November 2015	NA	NA	11.47	2.64	10.70	-1.58	11.61	1.41
December 2015	NA	NA	11.68	4.48	10.84	-0.32	11.47	0.13
January 2016	NA	NA	11.33	1.43	10.90	0.27	11.22	-2.05
February 2016	NA	NA	11.14	-0.34	10.80	-0.64	11.30	-1.29
April 2016	NA	NA	11.44	2.37	10.96	0.81	11.56	0.96
May 2016	NA	NA	11.38	1.80	10.62	-2.31	11.74	2.47
June 2016	NA	NA	10.83	-3.09	10.94	0.63	11.77	2.80
July 2016	NA	NA	10.80	-3.39	10.69	-1.66	11.83	3.28
August 2016	NA	NA	10.58	-5.29	10.96	0.83	11.81	3.09
September 2016	NA	NA	10.80	-3.32	10.88	0.07	11.71	2.22
October 2016	NA	NA	10.58	-5.35	10.58	-2.68	11.35	-0.85
November 2016	NA	NA	11.49	2.83	10.82	-0.52	11.44	-0.11
December 2016	10.79	0.00	11.27	0.83	10.55	-2.94	10.89	-4.89

January 2017	10.91	1.14	10.94	-2.14	10.40	-4.36	10.92	-4.67
February 2017	11.05	2.42	11.01	-1.51	10.53	-3.16	11.07	-3.37
March 2017	11.32	4.87	11.26	0.76	10.44	-3.97	11.23	-1.92
April 2017	11.44	5.99	11.47	2.65	10.66	-1.96	11.32	-1.17
May 2017	11.39	5.55	11.35	1.56	10.57	-2.80	11.45	0.02
June 2017	11.40	5.64	11.13	-0.40	11.00	1.16	11.53	0.67
July 2017	11.28	4.55	10.98	-1.72	10.78	-0.86	11.69	2.12
August 2017	11.38	5.49	11.16	-0.18	11.05	1.63	11.59	1.17
September 2017	11.21	3.85	10.76	-3.67	10.83	-0.35	11.47	0.12
October 2017	11.15	3.35	10.79	-3.47	10.49	-3.52	11.24	-1.87
November 2017	11.11	2.93	11.52	3.08	10.48	-3.64	10.86	-5.15
December 2017	10.95	1.49	11.08	-0.83	10.39	-4.38	10.85	-5.24
January 2018	11.01	2.05	11.66	4.31	10.23	-5.93	10.58	-7.61
February 2018	10.94	1.41	11.16	-0.18	10.07	-7.34	10.61	-7.39
March 2018	11.34	5.06	11.33	1.38	10.22	-5.97	10.96	-4.29
April 2018	10.98	1.76	11.14	-0.27	9.96	-8.36	11.13	-2.80
May 2018	11.00	1.95	10.89	-2.53	10.29	-5.31	11.32	-1.18
June 2018	10.99	1.85	10.93	-2.16	10.50	-3.40	11.42	-0.32
July 2018	11.03	2.26	10.72	-4.09	10.72	-1.41	11.49	0.29
August 2018	11.04	2.33	11.05	-1.15	10.56	-2.82	11.40	-0.47
September 2018	10.90	1.00	10.86	-2.81	10.24	-5.80	11.29	-1.44
October 2018	10.93	1.28	10.98	-1.73	10.19	-6.29	10.84	-5.34
November 2018	10.59	-1.87	11.24	0.54	10.10	-7.14	10.42	-9.02
December 2018	10.60	-1.78	11.43	2.31	10.20	-6.22	10.53	-8.09
January 2019	10.48	-2.92	11.50	2.95	10.03	-7.77	10.28	-10.23
February 2019	10.40	-3.67	10.80	-3.34	9.61	-11.58	10.30	-10.03
March 2019	10.76	-0.28	10.94	-2.13	9.77	-10.14	10.78	-5.86

April 2019	10.92	1.15	11.40	2.03	9.92	-8.75	10.99	-4.07
May 2019	11.05	2.38	11.16	-0.12	10.15	-6.66	11.06	-3.38
June 2019	11.16	3.38	11.08	-0.84	10.41	-4.27	11.10	-3.07
July 2019	11.15	3.33	10.79	-3.45	10.12	-6.89	11.18	-2.37
August 2019	11.23	4.03	11.09	-0.78	10.48	-3.60	11.10	-3.06

Table 2 Vehicle Classification Data

<i>Vehicle Class</i>	<i>Monthly Average Daily Volume</i>	<i>Monthly Total Volume</i>	<i>Monthly Total Volume Percentage</i>	<i>Monthly Total Overweight Vehicles</i>	<i>Monthly Total Overweight Percentage</i>
1	4	111	0.1	0	0
2	3133	97115	52.4	0	0
3	2307	71517	38.6	0	0
4	28	880	0.5	66	4.3
5	148	4600	2.5	93	6
6	54	1677	0.9	78	5.1
7	7	231	0.1	24	1.6
8	18	565	0.3	37	2.4
9	199	6158	3.3	456	29.6
10	67	2062	1.1	427	27.8
11	1	24	0	0	0
12	2	59	0	18	1.2
13	16	484	0.3	339	22
TOTAL	5983	185484	100	1538	100

Table 3 Top 10 Gross Vehicle Weight, Class 9 and 10

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2019-08-30	Friday	08:03:08	10	WB	4	108.18
2019-08-24	Saturday	13:44:44	9	WB	4	102.51
2019-08-16	Friday	12:23:05	10	EB	1	101.77
2019-08-29	Thursday	15:49:28	9	EB	1	101.05
2019-08-29	Thursday	14:25:05	9	EB	1	100.83
2019-08-24	Saturday	05:58:03	10	WB	4	98.72
2019-08-21	Wednesday	21:11:28	10	WB	4	98.6
2019-08-31	Saturday	22:46:35	10	WB	3	95.55
2019-08-24	Saturday	13:31:31	10	WB	4	95.14
2019-08-31	Saturday	13:52:14	10	EB	1	94.58

Table 4 Freight Summary

<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	EB	15	455	61	13.4	12210	632	3150
5	EB	8	2398	344	14.3	30371	2439	6969
6	EB	19	753	40	5.3	22607	690	4530
7	EB	11.5	63	0	0	2918	0	1097
8	EB	31	310	159	51.3	6359	3102	839
9	EB	33	3677	1080	29.4	144841	32417	29570
10	EB	33.5	969	199	20.5	37195	6155	5700
11	EB	36.5	13	13	100	0	243	0
12	EB	36.5	32	5	15.6	1816	113	415
13	EB	31.5	87	0	0	7718	0	2489
TOTAL	****	****	8757	1901	****	266035	****	54759
<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	WB	15	410	35	8.5	12721	441	3548
5	WB	8	2125	224	10.5	27040	1632	5916
6	WB	19	896	76	8.5	25597	1325	5009
7	WB	11.5	164	0	0	9380	0	3747
8	WB	31	246	122	49.6	4754	2572	455
9	WB	33	2378	685	28.8	97140	19686	20636
10	WB	33.5	1058	130	12.3	70674	3824	19793
11	WB	36.5	11	11	100	0	201	0
12	WB	36.5	26	3	11.5	1584	80	372
13	WB	31.5	389	0	0	33221	0	10484
TOTAL	****	****	7703	1286	****	282112	****	69960
GRAND TOTAL	****	****	16460	3187	480	548147	75553	124719

Table 5 Gross Vehicle Weight by Class and Lane

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	68	11	12	55	146	0
2	152861	34371	36664	155421	379317	26.2
3	186668	37786	35619	186715	446788	30.8
4	11583	1259	901	12261	26005	1.8
5	29175	3635	2892	25781	61483	4.2
6	21741	1557	1190	25732	50220	3.5
7	2808	110	901	8479	12298	0.8
8	8930	531	349	6977	16788	1.2
9	164934	12323	6448	110379	294084	20.3
10	40020	3331	6475	68023	117849	8.1
11	222	21	0	201	444	0
12	1613	316	0	1664	3592	0.2
13	7477	241	1262	31959	40939	2.8
TOTAL	628100	95492	92712	633647	1449952	100
GVW/LANE	43.32	6.59	6.39	43.7	100	0.01

Table 6 ESALs by Class and Lane and Flexible ESAL Factors

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.0091
2	16	5	4	19	44	0.45	0.001
3	66	13	11	70	160	1.63	0.0046
4	268	27	15	261	570	5.8	1.32
5	427	35	28	331	821	8.35	0.37
6	354	19	17	385	776	7.89	0.95
7	57	2	12	133	203	2.06	1.77
8	163	4	3	106	276	2.81	1
9	2563	221	86	1760	4630	47.08	1.54
10	367	36	103	1151	1658	16.86	1.64
11	0	0	0	0	0	0	0.33
12	23	6	0	33	63	0.64	1.97
13	156	4	14	459	633	6.43	2.63
TOTAL	4461	373	293	4707	9835	100	14
ESALS/LANE	45.4	3.8	3	47.9	100	-	-

Table 7 Site Summary: Volume and Vehicle Class

<i>Month</i>	<i>Total Volume</i>	<i>Monthly ADT</i>	<i>Monthly HCAD T</i>	<i>Passenger Vehicles</i>	<i>Passenger Vehicles %</i>	<i>Heavy Commercial Vehicles</i>	<i>Heavy Commercial Vehicles %</i>	<i>Heavy Commercial Vehicles in Driving Lane %</i>	<i>Heavy Commercial Vehicles in Passing Lane %</i>
Sep 2018	168517	5617	525	152759	90.6	15757.7	9.4	91.2	8.8
Oct 2018	175064	5647	711	153012	87.4	22051.6	12.6	89.2	10.8
Nov 2018	146400	5048	462	132552	90.5	13847.6	9.5	91.4	8.6
Dec 2018	125409	4645	311	115779	92.3	9630.4	7.7	92.7	7.3
Jan 2019	133289	4300	300	123974	93	9315.4	7	91	9
Feb 2019	119410	4265	291	111272	93.2	8137.7	6.8	90.3	9.7
Mar 2019	141065	4550	354	130102	92.2	10963.3	7.8	91.3	8.7
Apr 2019	153490	5116	486	138917	90.5	14572.9	9.5	91.5	8.5
May 2019	173668	5521	509	157896	90.9	15771.7	9.1	92.1	7.9
Jun 2019	174449	5815	447	161042	92.3	13407.1	7.7	91.4	8.6
Jul 2019	183848	5953	487	168763	91.8	15085	8.2	92	8
Aug 2019	185484	5952	540	168743	91	16740.7	9	91.7	8.3
TOTAL	1880093	-	-	1714811	-	165281	-	-	-
AVERAGE	156674	5202	452	142901	91	13773	9	91	9

###ESALs

<i>Month</i>	<i>ESALS EB Passing Lane</i>	<i>ESALS EB Driving Lane</i>	<i>ESALS WB Driving Lane</i>	<i>ESALS WB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Sep 2018	3524	307	339	5483	9653	93	7	3.5
Oct 2018	4662	506	752	8373	14293	91	9	2
Nov 2018	3290	378	262	3812	7741	92	8	1.3
Dec 2018	3015	294	125	1999	5432	92	8	6.9
Jan 2019	2027	357	125	1772	4281	89	11	6.7

Feb 2019	1543	263	101	1555	3462	89	11	0
Mar 2019	3281	317	107	2161	5866	93	7	1.7
Apr 2019	3972	446	157	3323	7898	92	8	1.3
May 2019	4537	378	225	3688	8828	93	7	1.9
Jun 2019	5735	566	376	7731	14407	93	7	1
Jul 2019	3580	242	207	4289	8318	95	5	4.4
Aug 2019	4521	373	293	4711	9898	93	7	3.6
TOTAL	43688	4426	3068	48895	100077	-	-	-
AVERAGE	3641	369	256	4075	8340	92	8	3

###Gross Vehicle Weight

<i>Month</i>	<i>GVW EB Passing Lane</i>	<i>GVW EB Driving Lane</i>	<i>GVW WB Passing Lane</i>	<i>GVW WB Driving Lane</i>	<i>Total GVW Kips</i>
Sep 18	557433	83173	93969	617052	1351626
Oct 18	660765	114150	125855	750518	1651289
Nov 18	502997	76986	76124	519011	1175118
Dec 18	431771	60619	59298	411800	963489
Jan 19	348573	60504	57163	381731	847971
Feb 19	298570	50034	51160	343533	743297
Mar 19	442275	70004	63946	420794	997018
Apr 19	538073	81895	76332	524296	1220597
May 19	604480	89811	94234	571951	1360476
Jun 19	848215	167986	182059	1169704	2367964
Jul 19	586947	86142	94663	612493	1380246
Aug 19	629231	95506	92730	633825	1451293
TOTAL	6449330	1036810	1067534	6956709	15510383
AVERAGE	537444	86401	88961	579726	1292532

###Overweight Vehicles

<i>Month</i>	<i>Total Number of Overweight Vehicles</i>	<i>Overweight / Total Volume</i>	<i>Overweight / Heavy Commercial Volume</i>	<i>Number Over 88,000 lbs</i>	<i>Number Over 98,000 lbs</i>
Sep 2018	1839	1.1	11.7	162	12
Oct 2018	2676	1.6	12.3	120	8
Nov 2018	872	0.6	6.2	99	18
Dec 2018	697	0.5	6.6	121	23
Jan 2019	502	0.4	5.5	70	23
Feb 2019	363	0.3	4.7	41	5
Mar 2019	598	0.4	5.5	72	16
Apr 2019	691	0.5	4.8	107	11
May 2019	1078	0.6	6.9	179	20

Jun 2019	2600	0.8	8.4	404	56
Jul 2019	1396	0.8	9.3	274	59
Aug 2019	1550	0.9	9.4	285	45
TOTAL	14862	-	-	1934	296
AVERAGE	1238.5	0.7	7.6	161.2	24.7

###Freight

<i>Month</i>	<i>EB Freight Tons</i>	<i>WB Freight Tons</i>	<i>Total Freight</i>	<i>EB Freight %</i>	<i>WB Freight %</i>
Sep 2018	45085	79834	124919	36.1	63.9
Oct 2018	66772	132772	199544	33.5	66.5
Nov 2018	48667	64472	113139	43	57
Dec 2018	42425	31221	73646	57.6	42.4
Jan 2019	30643	25215	55858	54.9	45.1
Feb 2019	22499	22257	44756	50.3	49.7
Mar 2019	44588	31107	75695	58.9	41.1
Apr 2019	56072	57075	113146	49.6	50.4
May 2019	60197	60434	120631	49.9	50.1
Jun 2019	71572	121297	192869	37.1	62.9
Jul 2019	43458	65276	108734	40	60
Aug 2019	54759	69960	124719	43.9	56.1
TOTAL	586736	760919	1347655	-	-
AVERAGE	48894.7	63409.9	112304.6	46.2	53.8